

Notice of Allowability

Application No.

10/528,253

Examiner

Richard Isla-Rodas

Applicant(s)

RIUS VAZQUEZ ET AL.

Art Unit

2829

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment after non-final submitted 08/03/2007.
2. ☒ The allowed claim(s) is/are 1-14.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

- The application's abstract which was submitted in the wrong format is hereby replaced with the following:

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Abstract

A test apparatus for testing a device under test (DUT) to detect a defect comprises a measurement circuit (ME), a threshold circuit (TH), and a control circuit (CG). The measurement circuit (ME) comprises a counter (C1) which counts clock pulses (CLK) during a count period (TC) to obtain a counted number (N) of clock pulses (CLK). The count period (TC) has a start determined by the start (t1) of a testing cycle which occurs at the instant a switch (S) which is coupled to an terminal (IN) of the device under test (DUT) removes a power supply voltage (VDD) from the terminal (IN) and the voltage (VDD') at the terminal (IN) starts decaying. An end of the count period (TC) is determined by an instant (t2) a comparator (COM1) detects that the voltage (VDD') at the terminal (IN) crosses a reference value (VREF). The control circuit (CG) generates the clock signal (CLK) and/or a reference number (NTH) taking into account the variability of the manufacturing process of the circuit under test (CUT). The threshold circuit (TH) generates a pass/fail signal (PF) by comparing the counted number (N) and the reference number (NTH).

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Allowable Subject Matter

2. Claims 1-14 are allowed.
3. The following is an examiner's statement of reasons for allowance:

In terms of claim 1, the prior art of record does not teach alone or in combination a test apparatus including a counter for counting the clock pulses during a count period to obtain a count number, wherein the count period has a start determined by the start of the testing cycle and an end determined by an instant the voltage at the terminal crosses the reference value, a threshold circuit for comparing the count number with a reference number to supply a pass/fail signal, in combination with all other elements in claim 1.

As to claims 2-12, the claims are allowed as they further limit allowed claim 1.

In terms of claim 13, the prior art of record does not teach alone or in combination, a method of testing a circuit including the step of supplying clock pulses, counting the clock pulses during a count period to obtain a count number, wherein the count period has a start determined by the start of the testing cycle and an end determined by an instant the voltage at the terminal crosses the reference value, comparing the count number with a reference number to supply a pass/fail signal, and controlling the value of the reference number and/or a clock frequency of the clock pulses in dependence on process parameters of the circuit under test, in combination with all other elements in claim 13.

In terms of claim 14, the prior art of record does not teach alone or in combination, an integrated circuit comprising a test circuit including a clock generator

tbr supplying clock pulses, a counter for counting the clock pulses during a count period to obtain a count number, wherein the count period has a start determined by flue start of the testing cycle and an end determined by an instant the voltage at the terminal crosses the reference value, a threshold circuit for comparing the count number with a reference number to supply a pass/fall signal, in combination with all other elements in claim 14.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
US-5,731,700 A	03-1998	McDonald, Charles	324/158.1
US-6,037,796 A	03-2000	Graef et al.	324/765

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Isla-Rodas whose telephone number is (571) 272-5056. The examiner can normally be reached on Monday through Friday 8 am to 4:30 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ha Nguyen can be reached on (571) 272-1678. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Richard Isla-Rodas
December 7, 2007

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SUPERVISORY